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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,679	03/30/2001	Srinivas Kandala	8371-117	9227

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EXAMINER	
MATTIS, JASON E	

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/822,679	KANDALA, SRINIVAS	
	Examiner	Art Unit	
	Jason E Mattis	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-23 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-23 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 3/30/01 & 2/24/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. The hyperlink is found on page 2 line 10 of the specification.

Claim Objections

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 7-24 have been renumbered claims 6-23. This renumbering is necessary since there is no claim labeled as number 6 in the original list of claims; therefore, claim 7 is renumber as claim 6, claim 8 is renumbered as claim 7, etc. Also, in future lists of claims, the Applicant is reminded that the dependencies on renumbered claims 6-23 must also be changed.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 users the acronyms "RME" and "SME"; however, there is no definition of these acronyms in the claim or in the specification preceding the claims. It is unclear what is meant by the acronyms "RME" and "SME". It is also recommended that the first occurrence of any acronym in the claims also contain the full written out term that the acronym represents to eliminate any confusion.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2 and 4-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Hulyalkar et al. (U.S. Pat. 5787080).

With respect to claim 1, Hulyalkar et al. discloses a wireless communication device **(See column 6 lines 31-42 and Figure 3 of Hulyalkar et al. for reference to a mobile terminal 54, which is a wireless communication device)**. Hulyalkar et al. also discloses a physical layer **(See column 6 lines 31-42 and Figure 3 of Hulyalkar et al. for reference to the mobile terminal 54 having a wireless physical layer)**. Hulyalkar et al. further discloses transmitting a reservation request about an impending transmission of data **(See column 8 lines 14-67 of Hulyalkar et al. for reference to transmitting a control frame that contains information about a request for a connection and the number of data slots, or amount of bandwidth, request for the connection)**. Hulyalkar et al. also discloses a second layer on top of the physical layer **(See column 6 lines 31-42 and Figure 3 of Hulyalkar et al. for reference to a wireless MAC layer, which is a second layer, on top of the wireless physical layer of the mobile terminal 54)**. Hulyalkar et al. further discloses generating a tag about the impending transmission and imparting the tag in the reservation request **(See column 8 line 43 to column 9 line 49 of Hulyalkar et al. for reference implementing a MAC layer reservation-based communications protocol that includes sending information including a request to set up a connection and a request for the number of slots needed for a connection, which are tags generated at the mobile terminal 54, being included in a control frame, which is a reservation request)**. Hulyalkar et al. also discloses a network layer on top of the second layer **(See column 6 lines 31-42 and Figure 3 of Hulyalkar et al. for reference to an ATM layer, which is a network layer, on top of the wireless MAC layer of the mobile terminal 54)**.

Hulyalkar et al. further discloses that the second layer includes a tag generation module for encoding in the tag a priority of the impending transmission **(See column 8 liens 43-67 of Hulyalkar for reference to the MAC layer reservation-based communications protocol also containing the ability to include a priority level in the control frame, meaning there is a tag generation module in the wireless MAC layer of the mobile terminal 54 that encodes this priority level in the control frame)**.

With respect to claim 2, Hulyalkar et al. discloses a wireless communication device **(See column 6 line 31-42 and Figure 3 of Hulyalkar et al. for reference to base station 12, which is a wireless communications device)**. Hulyalkar et al. also discloses a physical layer **(See column 6 lines 31-42 and Figure 3 of Hulyalkar et al. for reference to the base station 12 having a wireless physical layer)**. Hulyalkar et al. further discloses receiving a reservation request **(See column 8 lines 16-67 of Hulyalkar et al. for reference to receiving a control frame including a reservation request from a mobile terminal)**. Hulyalkar et al. also discloses a second layer on top of the physical layer **(See column 6 line 31-42 and Figure 3 of Hulyalkar et al. for reference to a wireless MAC layer on top of the wireless physical layer of the base station 12)**. Hulyalkar et al. further discloses receiving a reservation request from the physical layer **(See column 8 lines 16-67 of Hulyalkar et al. for reference to receiving the control frame with the control frame being a part of a MAC layer reservation-based communications protocol, meaning the control frame is sent to the wireless MAC layer of the base station 12)**. Hulyalkar et al. also discloses a network layer on top of the second layer **(See column 6 lien 31-42 of Hulyalkar et al.**

for reference to an ATM layer on top of the wireless MAC layer of the base station 12). Hulyalkar et al. further discloses that the second layer is adapted to process and finally resolve the received reservation request without accessing the network layer **(See column 8 line 43 to column 9 line 49 of Hulyalkar et al. for reference to a slot conformation phase in which the MAC layer reservation-based communications protocol sends a message to all mobile terminals 54 indicating the slots, or bandwidth, allocated to each mobile terminal 54 after all reservation requests have been analyzed)**.

With respect to claim 4, Hulyalkar et al. discloses that the second layer reads a tag from the reservation request to determine a priority **(See column 8 lines 43-67 of Hulyalkar et al. for reference to the control frame sent by the mobile terminal 54 including a priority level that is decoded by the base station and is used in determining the bandwidth allocation for the mobile terminal 54)**.

With respect to claim 5, Hulyalkar et al. discloses that the second layer is adapted to process and finally resolve the reservation request based on Quality of Service considerations **(See column 11 line 53 to column 12 line 5 of Hulyalkar et al. for reference to using the control frame to negotiate QoS requirements)**.

With respect to claims 6, 12, and 18, Hulyalkar et al. discloses a device, article, and method, with the device comprising a physical medium **(See column 6 lines 31-42 and Figure 3 of Hulyalkar et al. for reference to a mobile terminal 54, which is a device and article, comprising a wireless physical layer, which is a physical medium)**. Hulyalkar et al. also discloses a processor coupled with the physical medium

having a storage medium having stored thereon instructions **(The processor and storage medium with stored instructions is inherent in the device of Hulyalkar et al. as all wireless communication devices of the sort of Hulyalkar must some processing device that contains some processing instructions to be able to send, receive, and interpret data)**. Hulyalkar et al. further discloses generating a reservation request for transmitting data **(See column 8 lines 16-67 of Hulyalkar et al. for reference to generating a control frame, which is a reservation request that includes a request to set up a connection and a request for the number of slots needed for a connection)**. Hulyalkar et al. also discloses determining a priority for transmitting the data and generating a tag that encodes the priority **(See column 8 lines 43-67 of Hulyalkar et al. for reference to generating a priority level for the data transmission and for reference to including this priority data in the control frame, meaning that the priority data is encoded in the reservation request)**. Hulyalkar et al. further discloses passing the data and the tag to a medium access control layer, examining the data to determine a required bandwidth for transmission, and encoding the tag and the bandwidth in a reservation request frame **(See column 8 line 16 to column 9 line 49 of Hulyalkar et al. for reference to, using a MAC layer reservation-based communications protocol, that includes a control frame, which is a reservation request, including the priority information and also including a number of slots, or amount of bandwidth, that the mobile terminal 54 determines is necessary for the data transmission, meaning the MAC layer of the mobile terminal determines the required bandwidth and the encodes this bandwidth**

information along with the priority information in the control frame). Hulyalkar et al. also discloses transmitting the reservation request frame **(See column 8liens 16-67 of Hulyalkar et al. for reference to transmitting the control frame from a mobile terminal 54 to a base station 12)**.

With respect to claims 7, 13, and 19, Hulyalkar et al. discloses storing the data in a buffer after passing it and prior to examining it **(See column 8 lines 43-67 of Hulyalkar et al. for reference to the MAC layer having a memory, which is a buffer, to store the data while determining a bandwidth requirement)**.

With respect to claims 8, 14, and 20, Hulyalkar et al. discloses that the priority is based on one of a default class and an AP-designated class **(See column 8 lines 43-67 of Hulyalkar et al. for reference to the priority being based on a default first-come-first-served class, meaning that the first requests received are given priority over later requests received)**.

With respect to claims 9, 15, and 21, Hulyalkar et al. discloses a device, article, and method, with the device comprising a physical medium **(See column 6 lines 31-42 and Figure 3 of Hulyalkar et al. for reference to a base station 12, which is a device and article, comprising a wireless physical layer, which is a physical medium)**. Hulyalkar et al. also discloses a processor coupled with the physical medium having a storage medium having stored thereon instructions **(The processor and storage medium with stored instructions is inherent in the device of Hulyalkar et al. as all wireless communication devices of the sort of Hulyalkar must some processing device that contains some processing instructions to be able to send,**

receive, and interpret data). Hulyalkar et al. further discloses receiving a reservation request frame **(See column 8 lines 16-67 of Hulyalkar et al. for reference to the base station receiving a control frame, which is a reservation request frame, from a mobile terminal 54)**. Hulyalkar et al. also discloses decomposing the reservation request frame to extract a reservation request by decoding a tag, reading the tag to identify a priority, examining the priority and resolving the reservation request while still in the medium access control layer **(See column 8 line 16 to column 9 line 49 of Hulyalkar et al. for reference to using the control frame received as a part of the MAC layer reservation-based communications protocol to determine a priority level as well as an amount of slots, or the required bandwidth, of a requested connection, by decoding a received control frame that includes a priority level and a bandwidth requirement and using this information to resolve the reservation request by allocating a number of slots, or an amount of bandwidth, to the requesting device)**.

With respect to claims 10, 16, and 22, Hulyalkar et al. discloses resolving the request by determining that there are insufficient resources and generating and transmitting a reservation request reject frame **(See column 9 lines 33-49 of Hulyalkar et al. for reference to determining that more resources are requested than are available and broadcasting a slot confirmation to mobile terminals that indicates, based on priority, which slots have been allocated to which mobile terminals, meaning that if a mobile terminal has low priority and is not allocated any slots, it**

will receive this information in a control phase of a CDS frame, which is a reservation request accept/reject frame).

With respect to claims 11, 17, and 23, Hulyalkar et al. discloses resolving the reservation request by scheduling a transmission opportunity based on the priority **(See column 9 lines 33-49 of Hulyalkar et al. for reference to scheduling a transmission opportunity to a mobile terminal based on the priority information).**

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wright et al. (U.S. Pat. 6240083) discloses MAC layer reservation method using an Aloha reservation scheme. Kondylis et al. (U.S. Pat. 6721290) discloses the benefits of resource reservation at the MAC layer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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